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09/685,715	10/10/2000	Leon Lumelsky	MLD-RE-2000-003	4510

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EXAMINER	
LE, DANH C	

ART UNIT	PAPER NUMBER
2683	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/685,715	Applicant(s) LUMELSKY, LEON	
	Examiner DANH C LE	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24,33-56,64-76 and 82-92* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19,22,33-52,54,64-74 and 82-89* is/are rejected.

7)☒ Claim(s) *20,21,23,24,52,53,55,56,75,76,90 and 91* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. **Claims 1, 2, 11-17, 33, 34, 42-49, 64, 68-73, 82, 86-88 are rejected under 35 U.S.C. 102(e) as being anticipated by Mahany (US 6,614,768).**

As to claim 1, Mahany teaches in a short-range wireless networking environment (figure 6 and col.14, line 12-col.16, line 20), a method of enabling communication between at least one end device and at least one application server, comprising the steps of:

providing at least one access point (AP, 81), wherein each of the APs has at least one short range wireless connection and, at least one network connection;

providing at least one extension point (EP, 82, 83, 85, 85), wherein:

each of the EPs has at least two short-range wireless connections;

at least one of the EPs communicates with at least one of the APs; and

at least one of the EPs communicates with at least one of the end devices; and transmitting traffic between a selected one of the application servers and a selected one

of the end devices, wherein the transmitted traffic flows through a selected one of the APs and at least one of the EPs.

As to claim 2, Mahany teaches the method according to Claim 1, wherein a short-range wireless link established through at least one of the two short-range wireless connections uses a protocol known as "Bluetooth" (col.14, line 12-col.16, line 20).

As to claim 10, Mahany teaches the method according to Claim 1, wherein each EP comprises an antenna controller, an amplifier, a power supply, and a short-range communication function (figure 4 and col.9, lines 22-col.10, line 65).

As to claim 11, Mahany teaches the method according to Claim 10, wherein the short-range communication function is a Bluetooth module (col.14, line 12-col.16, line 20).

As to claim 12, Mahany teaches the method according to Claim 1, wherein each EP comprises an antenna controller, an amplifier, a power supply, and a short-range radio frequency communication module (figure 4 and col.9, lines 22-col.10, line 65).

As to claim 13, Mahany teaches the method according to Claim 12, wherein the short-range radio frequency communication module is a Bluetooth module (col.14, line 12-col.16, line 20).

As to claim 14, Mahany teaches the method according to Claim 1, wherein the at least one EP communicating with the at least one AP and the at least one EP communicating with the at least one end device are the same EP (col.14, line 12-col.16, line 20).

As to claim 15, Mahany teaches the method according to Claim. 1, further comprising the step of providing a connection table which maintains a plurality of EP parameter blocks (col.14, lines 51-65).

As to claim 16, Mahany teaches the method according to Claim 15, wherein the connection table is provided at a network control server (col.14, lines 51-65).

As to claim 17, Mahany teaches the method according to Claim 15, further comprising the step of using the EP parameter blocks to describe a route between a selected EP and a selected AP (col.14, line 12-col.16, line 20).

As to claim 33, the claim is a computer claim of claim 1; therefore, the claim is interpreted and rejected as set forth in the claim 1.

As to claim 34, the claim is a computer claim of claim 2; therefore, the claim is interpreted and rejected as set forth in the claim 2.

As to claim 42, the claim is a computer claim of claim 10; therefore, the claim is interpreted and rejected as set forth in the claim 10.

As to claim 43, the claim is a computer claim of claim 11; therefore, the claim is interpreted and rejected as set forth in the claim 11.

As to claim 44, the claim is a computer claim of claim 12; therefore, the claim is interpreted and rejected as set forth in the claim 12.

As to claim 45, the claim is a computer claim of claim 13; therefore, the claim is interpreted and rejected as set forth in the claim 13.

As to claim 46, the claim is a computer claim of claim 14; therefore, the claim is interpreted and rejected as set forth in the claim 14.

As to claim 47, the claim is a computer claim of claim 15; therefore, the claim is interpreted and rejected as set forth in the claim 15.

As to claim 48, the claim is a computer claim of claim 16; therefore, the claim is interpreted and rejected as set forth in the claim 16.

As to claim 49, the claim is a computer claim of claim 17; therefore, the claim is interpreted and rejected as set forth in the claim 17.

As to claim 64, the claim is a system claim of claim 1; therefore, the claim is interpreted and rejected as set forth in the claim 1.

As to claim 69, the claim is a system claim of claim 11; therefore, the claim is interpreted and rejected as set forth in the claim 11.

As to claim 68, the claim is a system claim of claim 12; therefore, the claim is interpreted and rejected as set forth in the claim 12.

As to claim 70, the claim is a system claim of claim 14; therefore, the claim is interpreted and rejected as set forth in the claim 14.

As to claim 71, the claim is a system claim of claim 15; therefore, the claim is interpreted and rejected as set forth in the claim 15.

As to claim 72, the claim is a system claim of claim 16; therefore, the claim is interpreted and rejected as set forth in the claim 16.

As to claim 73, the claim is a system claim of claim 17; therefore, the claim is interpreted and rejected as set forth in the claim 17.

As to claim 82, Mahany teaches extension point device (figure 6 and col.14, line 12-col.16, line 20) for enabling communication between at least one of a plurality of end

devices and at least one application server in a short-range wireless networking environment, comprising:

means for establishing at least two short-range wireless connections from the EP;

means for communicating, from the EP, with at least one access point (AP), wherein each of the APs has at least one short-range wireless connection and at least one network connection;

means for communicating, from the EP, with at least one of the end devices; and

means for transmitting traffic between the application server and the at least one end device, wherein the transmitted traffic flows through a selected one of the AP and the EP.

As to claim 86, the limitation of the claim is same as the limitation of claim 10; therefore, the claim is interpreted and rejected as set forth in the claim 10.

As to claim 87, the limitation of the claim is same as the limitation of claim 2; therefore, the claim is interpreted and rejected as set forth in the claim 2.

As to claim 88, the limitation of the claim is same as the limitation of claim 14; therefore, the claim is interpreted and rejected as set forth in the claim 14.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 3-8, 34-40, 65-67, 83-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahany in view of Westbrook (US 6,525,855).**

As to claims 3-8, Mahany teaches an antenna is used to communicate with a selected one of the Aps/Eps, Mahany fails to teach the antenna either directional antenna or omnidirectional antenna. Westbrook teaches the antenna either directional antenna or omnidirectional antenna (col.9, line 19-32 and col.11, lines 52-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Westbrook into the system of Mahany in order to provide a better power balance for the link.

As to claims 34-40, the claims are computer claims of claims 3-8; therefore, the claims are interpreted and rejected as set forth in the claims 3-8.

As to claims 65-67, the claims are system claim of claim 3-5; therefore, the claims are interpreted and rejected as set forth in the claims 3-5.

As to claims 83-85, the limitation of the claims are same as the limitation of claims 3-5; therefore, the claims are interpreted and rejected as set forth in the claims 3-5.

3. **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mahany in view of Perez (US 6,542,791).**

As to claim 9, Mahany teaches the method according to Claim 1, wherein each EP is powered using a battery. Mahany fails to teach power is photovoltaic array oz photovoltaic module. Perez teaches power is photovoltaic array oz photovoltaic

module (col.6, lines 23-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Perez into the system of Mahany in order to maximize effective capacity of the renewable power source.

As to claim 40, the claim is a computer claim of claim 9; therefore, the claim is interpreted and rejected as set forth in the claim 9.

Claims 18, 19, 22, 50, 51, 54, 74, 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahany and Westbrook in view of Gaucher (US 6,175,860).

As to claims 18, 19, 22, the combination of Mahany and Westbrook teaches the method according to Claim 1, wherein a short-range wireless link established through at least one of the two short-range wireless connections uses an omnidirectional antenna at a first endpoint of the wireless link and a directional antenna at a second endpoint of the wireless link. The combine of Mahany and Westbrook fails to teach a power of transmission is set to a minimum value and a position of the directional antenna is set to minimize a bit error rate along the wireless link. Gaucher teaches a power of transmission is set to a minimum value and a position of the directional antenna is set to minimize a bit error rate along the wireless link (col.9, lines 9-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Westbrook into the system of Mahany in order to control a diverse group of devices to the network without requiring user intervention or configuration.

As to claims 50, 51, 54 the claims are computer claims of claims 18, 19, 22; therefore, the claims are interpreted and rejected as set forth in the claims 18, 19, 22.

As to claim 74, the claim is a system claim of claim 18; therefore, the claim is interpreted and rejected as set forth in the claim 18.

As to claim 89, the limitation of the claim is same as the limitation of claim 18; therefore, the claim is interpreted and rejected as set forth in the claim 18.

Allowable Subject Matter

Claims 20, 21, 23, 24, 52, 53, 55, 56, 75, 76, 90, 91 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 20, 21, 23, 24, 52, 53, 55, 56, 75, 76, 90, 91, the teaching of prior arts either alone or in combine fails to teach the step of dynamically determining the position of the directional antenna, further comprising the steps of positioning the directional antenna. at a plurality of angles toward the omnidirectional antenna; recording the bit error rate at each of the angles; and selecting that one of the angles which exhibits a minimal value of the bit error rate to be the position of the directional antenna and further comprising the step of dynamically determining the power of transmission of the directional antenna, further comprising the steps of establishing a default value for the power of transmission; recording a bit error rate at the default value; successively reducing the power of transmission maul connectivity, is lost ax the

hit error rate crosses a threshold; and setting the power of transmission to be a value that results in the bit error rate staying below the threshold.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Cheung et al (US 6,549,786) teaches the method and apparatus for connecting a wireless LAN to a wired LAN.

B. Kobayashi et al (US 5,724,346) teaches the means for maintenance connectable access point owing to movement of a mobile station between cells in a wireless LAN system.

C. Mahany et al (US 6,654,378) teaches the transaction control system inclding portable data terminal and mobile customer service station.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C LE whose telephone number is 703-306-0542. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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